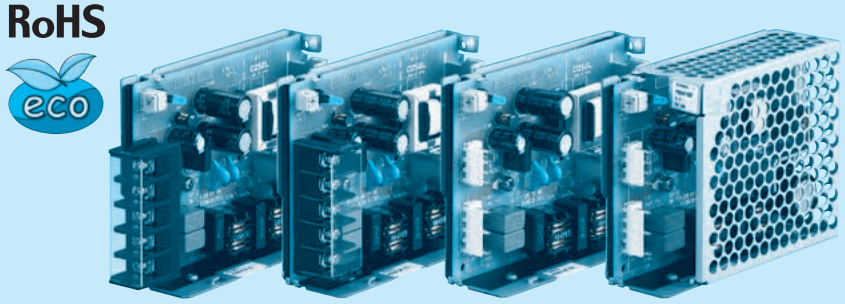
COSEL AC-DC Power Supplies Medical Type

PMA15F

Ordering information

PM	A	15	F	-□	-□
①	②	③	④	⑤	⑧



Horizontal terminal block (option : -T1) | Vertical terminal block (option : -T) | Standard type | with Cover (option : -N)

Example recommended EMI/EMC filter
NAM-04-000

Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
T : Vertical terminal block
T1: Horizontal terminal block
N : with Cover
J1 : VH(J.S.T.)connector type

Specification is changed at option, refer to Instruction Manual.

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

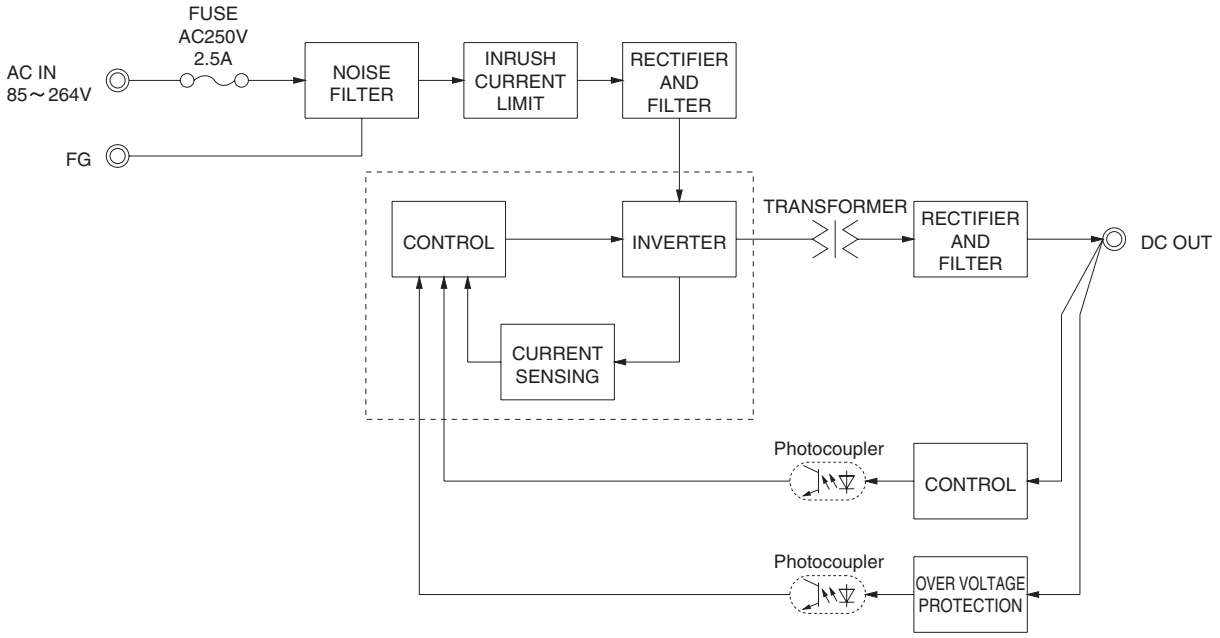
MODEL	PMA15F-3R3	PMA15F-5	PMA15F-12	PMA15F-15	PMA15F-24
MAX OUTPUT WATTAGE[W]	9.9	15	15.6	15	16.8
DC OUTPUT	3.3V 3A	5V 3A	12V 1.3A	15V 1A	24V 0.7A

SPECIFICATIONS

	MODEL		PMA15F-3R3	PMA15F-5	PMA15F-12	PMA15F-15	PMA15F-24
INPUT	VOLTAGE[V]		AC85 - 264 1φ (Refer to the Instruction Manual 1.1 and 3.2) ＊3				
	CURRENT[A]	ACIN 100V	0.30typ (Io=100%)	0.40typ (Io=100%)			
		ACIN 200V	0.15typ (Io=100%)	0.20typ (Io=100%)			
	FREQUENCY[Hz]		50 / 60 (47 - 440)				
	EFFICIENCY[%]	ACIN 100V	66typ	70typ	74typ	76typ	76typ
		ACIN 200V	67typ	74typ	78typ	79typ	79typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start)				
		ACIN 200V	30typ (Io=100%) (At cold start)				
	LEAKAGE CURRENT[mA]		0.05/0.10max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60601-1)				
OUTPUT	VOLTAGE[V]		3.3	5	12	15	24
	CURRENT[A]		3.0	3.0	1.3	1.0	0.7
	LINE REGULATION[mV]		20max	20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max
	RIPPLE[mVp-p] ＊1	0 to +50℃	80max	80max	120max	120max	120max
		-10 - 0℃	140max	140max	160max	160max	160max
	RIPPLE NOISE[mVp-p] ＊1	0 to +50℃	120max	120max	150max	150max	150max
		-10 - 0℃	160max	160max	180max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max
		-10 to +50℃	60max	60max	150max	180max	290max
	DRIFT[mV] ＊2		20max	20max	48max	60max	96max
	START-UP TIME[ms]		200typ (ACIN 100V, Io=100%) ＊Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.				
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)				
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.60	4.50 to 5.50	10.00 to 13.20	13.20 to 18.00	19.20 to 27.00
	OUTPUT VOLTAGE SETTING[V]		3.30 to 3.40	5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.96
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]		4.00 to 5.25	5.75 to 7.00	15.00 to 18.00	20.00 to 25.00	30.00 to 37.00
	OPERATING INDICATION		LED (Green)				
	REMOTE ON/OFF		Not provided				
ISOLATION	INPUT-OUTPUT		AC4,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)				
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +70℃, 20 - 90%RH (Non condensing), 3,000m (10,000 feet) max ＊3				
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max				
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis				
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis				
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60601-1, C-UL (CSA-C22.2 No.601.1), EN60601-1				
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR11-B, CISPR22-B, EN55011-B, EN55022-B				
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Class A) ＊6 (Not built-in to active filter ＊4)				
OTHERS	CASE SIZE/WEIGHT		31×78×103mm [1.22×3.07×4.06 inches] (W×H×D) / 230g max (with cover : 265g max)				
	COOLING METHOD		Convection				

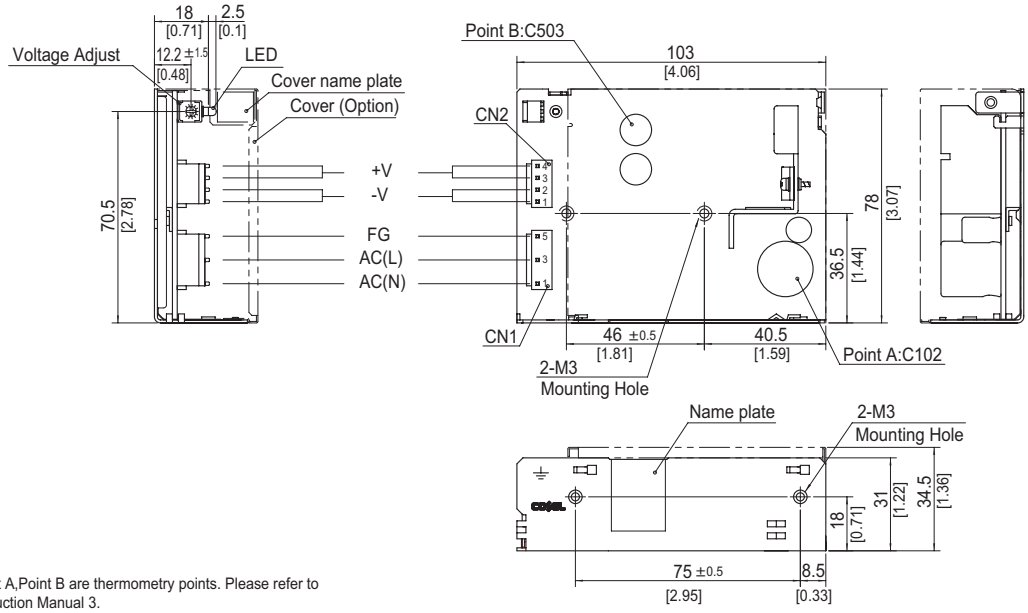
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN: RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Derating is required.
＊4 When two or more units are used, they may not comply with the harmonic attenuator. Please contact us for details.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about another class.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,T1 and N is different from standard model and refer to 4 Option of instruction manual for detalis.



※ Point A,Point B are thermometry points. Please refer to Instruction Manual 3.

I/O Connector		Mating Connector	Terminal	
CN1	1-1123724-3	1-1123722-5	Chain	1123721-1
			Loose	1318912-1
CN2	1-1123723-4	1-1123722-4	Chain	1123721-1
			Loose	1318912-1

(Mfr : Tyco Electronics AMP)

※ I/O Connector is Mfr.Tyco Electronics AMP
※ Option : -J1 : (J.S.T) connector type
-T : Vertical terminal block type
-T1 : Horizontal terminal block type
Refer to Instruction Manual 4.

<PIN CONNECTION>

CN1

Pin No.	Input
1	AC(N)
2	
3	AC(L)
4	
5	FG

CN2

Pin No.	Output
1, 2	-V
3, 4	+V

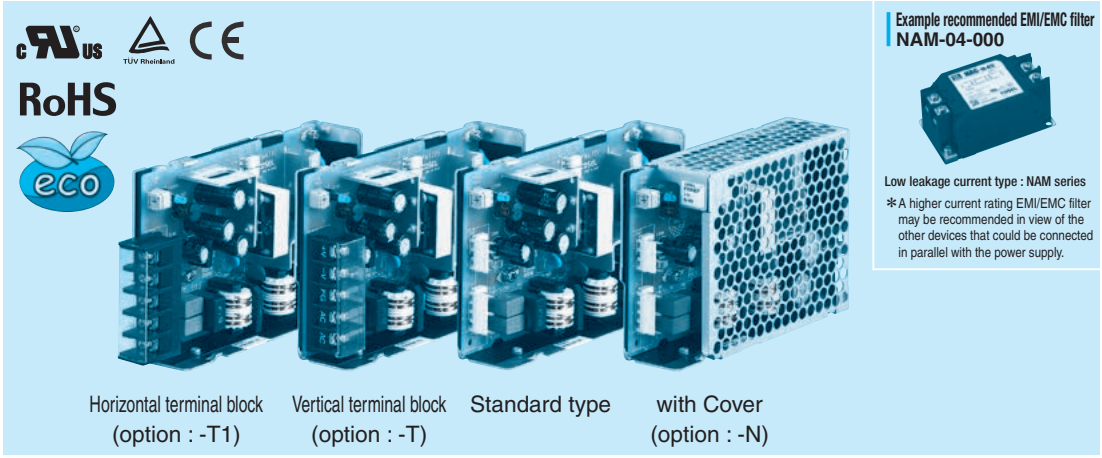
※ Tolerance : ±1 [±0.04]
※ Weight : 230g max (with cover : 265g max)
※ PCB Material/thickness : CEM-3 / 1.6mm [0.06inches]
※ Chassis material : Electric galvanizing steel board
※ Keep drawing current per pin bellow 5A of CN2.
※ Dimensions in mm, [ ]=inches
※ Mounting torque : 0.6N・m (6.3kgf・cm) max
※ Please connect safety ground to the unit in 2-M3 holes.

COSEL AC-DC Power Supplies Medical Type

PMA30F

Ordering information

PM	A	30	F	-□	-□
①	②	③	④	⑤	⑧



Horizontal terminal block (option : -T1) | Vertical terminal block (option : -T) | Standard type | with Cover (option : -N)

Example recommended EMI/EMC filter
NAM-04-000

Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
T : Vertical terminal block
T1: Horizontal terminal block
N : with Cover
J1 : VH(J.S.T.)connector type

Specification is changed at option, refer to Instruction Manual.

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

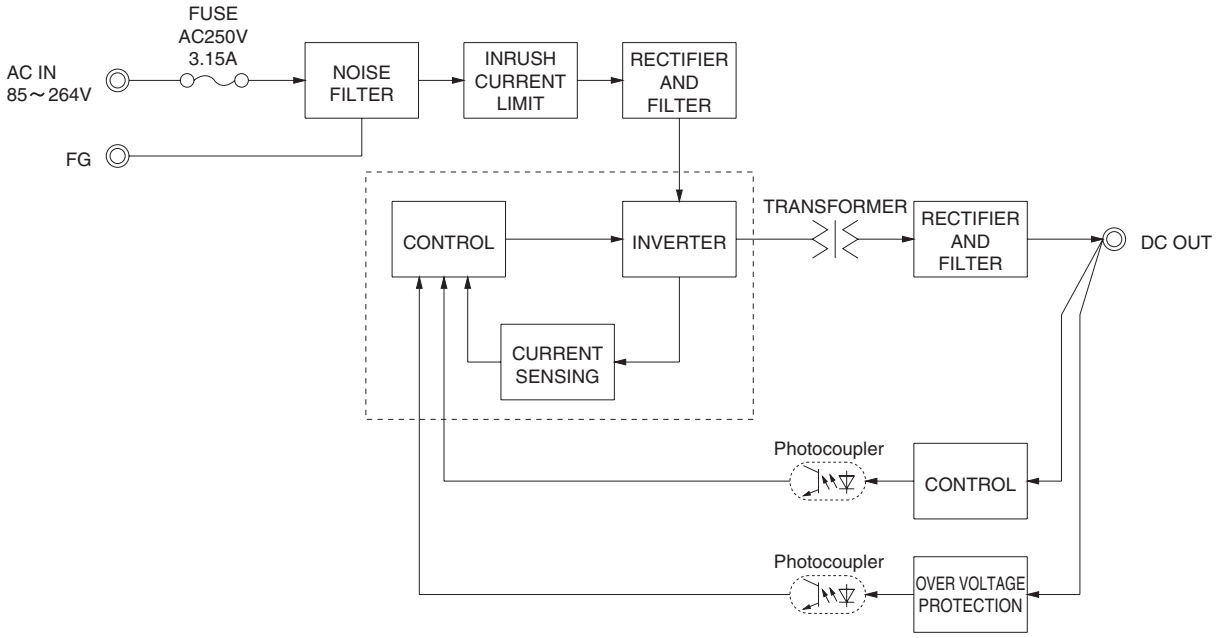
MODEL	PMA30F-3R3	PMA30F-5	PMA30F-12	PMA30F-15	PMA30F-24
MAX OUTPUT WATTAGE[W]	19.8	30	30	30	31.2
DC OUTPUT	3.3V 6A	5V 6A	12V 2.5A	15V 2A	24V 1.3A

SPECIFICATIONS

	MODEL		PMA30F-3R3	PMA30F-5	PMA30F-12	PMA30F-15	PMA30F-24
INPUT	VOLTAGE[V]		AC85 - 264 1φ (Refer to the Instruction Manual 1.1 and 3.2) ＊3				
	CURRENT[A]	ACIN 100V	0.50typ (Io=100%)	0.70typ (Io=100%)			
		ACIN 200V	0.30typ (Io=100%)	0.40typ (Io=100%)			
	FREQUENCY[Hz]		50 / 60 (47 - 440)				
	EFFICIENCY[%]	ACIN 100V	67typ	71typ	76typ	77typ	77typ
		ACIN 200V	69typ	74typ	78typ	80typ	80typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start)				
		ACIN 200V	30typ (Io=100%) (At cold start)				
	LEAKAGE CURRENT[mA]		0.05 / 0.10max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60601-1)				
OUTPUT	VOLTAGE[V]		3.3	5	12	15	24
	CURRENT[A]		6.0	6.0	2.5	2.0	1.3
	LINE REGULATION[mV]		20max	20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max
	RIPPLE[mVp-p] ＊1	0 to +50℃	80max	80max	120max	120max	120max
		-10 - 0℃	140max	140max	160max	160max	160max
	RIPPLE NOISE[mVp-p] ＊1	0 to +50℃	120max	120max	150max	150max	150max
		-10 - 0℃	160max	160max	180max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max
		-10 to +50℃	60max	60max	150max	180max	290max
	DRIFT[mV] ＊2		20max	20max	48max	60max	96max
	START-UP TIME[ms]		200typ (ACIN 100V, Io=100%) ＊Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.				
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)				
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.60	4.50 to 5.50	10.00 to 13.20	13.20 to 18.00	19.20 to 27.00
	OUTPUT VOLTAGE SETTING[V]		3.30 to 3.40	5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.96
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]		4.00 to 5.25	5.75 to 7.00	15.00 to 18.00	20.00 to 25.00	30.00 to 37.00
	OPERATING INDICATION		LED (Green)				
	REMOTE ON/OFF		Not provided				
ISOLATION	INPUT-OUTPUT		AC4,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)				
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +70℃, 20 - 90%RH (Non condensing), 3,000m (10,000feet) max ＊3				
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max				
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis				
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis				
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60601-1, C-UL (CSA-C22.2 No.601.1), EN60601-1				
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR11-B, CISPR22-B, EN55011-B, EN55022-B				
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Class A) ＊6 (Not built-in to active filter ＊4)				
OTHERS	CASE SIZE/WEIGHT		31×82×120mm [1.22×3.23×4.72 inches] (W×H×D) / 240g max (with cover : 280g max)				
	COOLING METHOD		Convection				

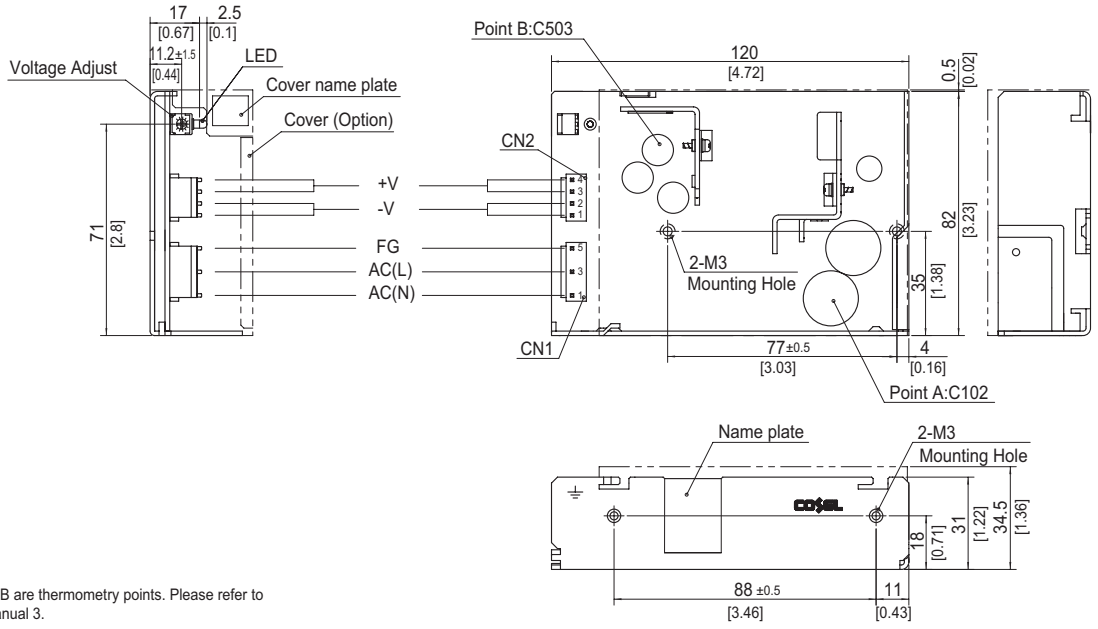
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN: RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Derating is required.
＊4 When two or more units are used, they may not comply with the harmonic attenuator. Please contact us for details.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about another class.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,T1 and N is different from standard model and refer to 4 Option of instruction manual for detalis.



※ Point A,Point B are thermometry points. Please refer to Instruction Manual 3.

I/O Connector		Mating Connector	Terminal	
CN1	1-1123724-3	1-1123722-5	Chain	1123721-1
			Loose	1318912-1
CN2	1-1123723-4	1-1123722-4	Chain	1123721-1
			Loose	1318912-1

(Mfr : Tyco Electronics AMP)

※ I/O Connector is Mfr.Tyco Electronics AMP
※ Option : -J1 : (J.S.T) connector type
-T : Vertical terminal block type
-T1 : Horizontal terminal block type
Refer to Instruction Manual 4.

<PIN CONNECTION>

CN1

Pin No.	Input
1	AC(N)
2	
3	AC(L)
4	
5	FG

CN2

Pin No.	Output
1, 2	-V
3, 4	+V

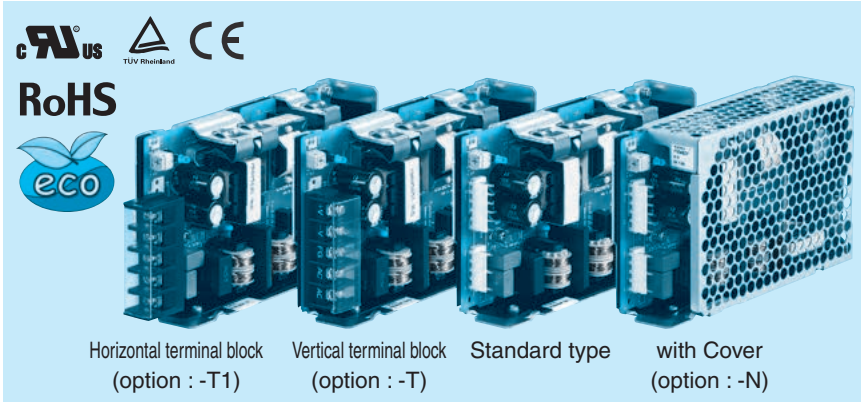
※ Tolerance : ±1 [±0.04]
※ Weight : 240g max (with cover : 280g max)
※ PCB Material/thickness : CEM-3 / 1.6mm [0.06inches]
※ Chassis material : Aluminum
※ Keep drawing current per pin bellow 5A of CN2.
※ Dimensions in mm, [ ]=inches
※ Mounting torque : 0.49N・m (5kgf・cm) max
※ Please connect safety ground to the unit in 2-M3 holes.

COSEL AC-DC Power Supplies Medical Type

PMA60F

Ordering information

PM	A	60	F	-□	-□
①	②	③	④	⑤	⑧



Horizontal terminal block (option : -T1) | Vertical terminal block (option : -T) | Standard type | with Cover (option : -N)

Example recommended EMI/EMC filter
NAM-04-000

Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
T : Vertical terminal block
T1: Horizontal terminal block
N : with Cover
J1 : VH(J.S.T.)connector type
R : with Remote ON/OFF

Specification is changed at option, refer to Instruction Manual.

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

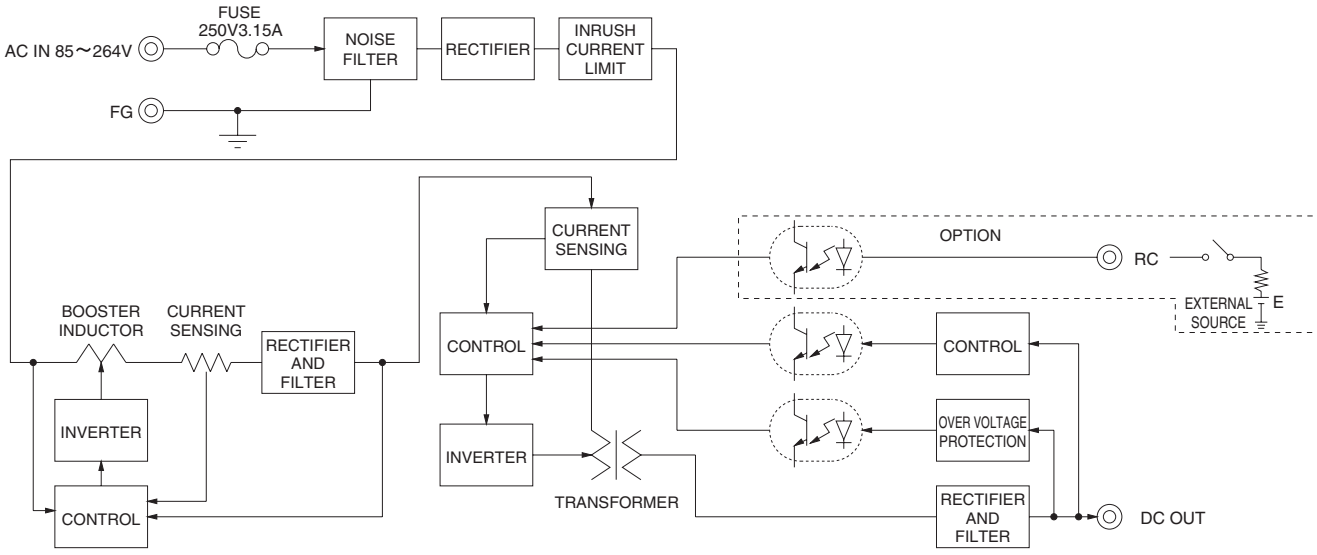
MODEL	PMA60F-3R3	PMA60F-5	PMA60F-12	PMA60F-15	PMA60F-24
MAX OUTPUT WATTAGE[W]	39.6	60	60	60	60
DC OUTPUT	3.3V 12A	5V 12A	12V 5A	15V 4A	24V 2.5A

SPECIFICATIONS

	MODEL		PMA60F-3R3	PMA60F-5	PMA60F-12	PMA60F-15	PMA60F-24
INPUT	VOLTAGE[V]		AC85 - 264 1φ (Refer to the Instruction Manual 1.1)				
	CURRENT[A]	ACIN 100V	0.7typ (Io=100%)	0.8typ (Io=100%)			
		ACIN 200V	0.4typ (Io=100%)	0.5typ (Io=100%)			
	FREQUENCY[Hz]		50 / 60 (47 - 63)				
	EFFICIENCY[%]	ACIN 100V	77typ	80typ	80typ	81typ	81typ
		ACIN 200V	78typ	83typ	82typ	83typ	83typ
	POWER FACTOR (Io=100%)	ACIN 100V	0.98typ				
		ACIN 200V	0.85typ	0.90typ			
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start)				
		ACIN 200V	30typ (Io=100%) (At cold start)				
	LEAKAGE CURRENT[mA]		0.09 / 0.18max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60601-1)				
OUTPUT	VOLTAGE[V]		3.3	5	12	15	24
	CURRENT[A]		12.0	12.0	5.0	4.0	2.5
	LINE REGULATION[mV]		20max	20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max
	RIPPLE[mVp-p] ＊1	0 to +50℃	80max	80max	120max	120max	120max
		-10 - 0℃	140max	140max	160max	160max	160max
	RIPPLE NOISE[mVp-p] ＊1	0 to +50℃	120max	120max	150max	150max	150max
		-10 - 0℃	160max	160max	180max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max
		-10 to +50℃	60max	60max	150max	180max	290max
	DRIFT[mV] ＊2		20max	20max	48max	60max	96max
	START-UP TIME[ms]		250typ (ACIN 100V, Io=100%)				
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)				
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.60	4.50 to 5.50	10.00 to 13.20	13.20 to 18.00	19.20 to 27.00
	OUTPUT VOLTAGE SETTING[V]		3.30 to 3.40	5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.96
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]		4.00 to 5.25	5.75 to 7.00	15.00 to 18.00	20.00 to 25.00	30.00 to 37.00
	OPERATING INDICATION		LED (Green)				
	REMOTE ON/OFF		Optional (Required external power source)				
ISOLATION	INPUT-OUTPUT-RC ＊3		AC4,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	OUTPUT-RC-FG ＊3		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)				
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +70℃, 20 - 90%RH (Non condensing), 3,000m (10,000feet) max ＊4				
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max				
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis				
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis				
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60601-1, C-UL (CSA-C22.2 No.601.1), EN60601-1				
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR11-B, CISPR22-B, EN55011-B, EN55022-B				
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊6				
OTHERS	CASE SIZE/WEIGHT		32×82×135mm [1.26×3.23×5.31 inches] (W×H×D) / 350g max (with cover : 395g max)				
	COOLING METHOD		Convection				

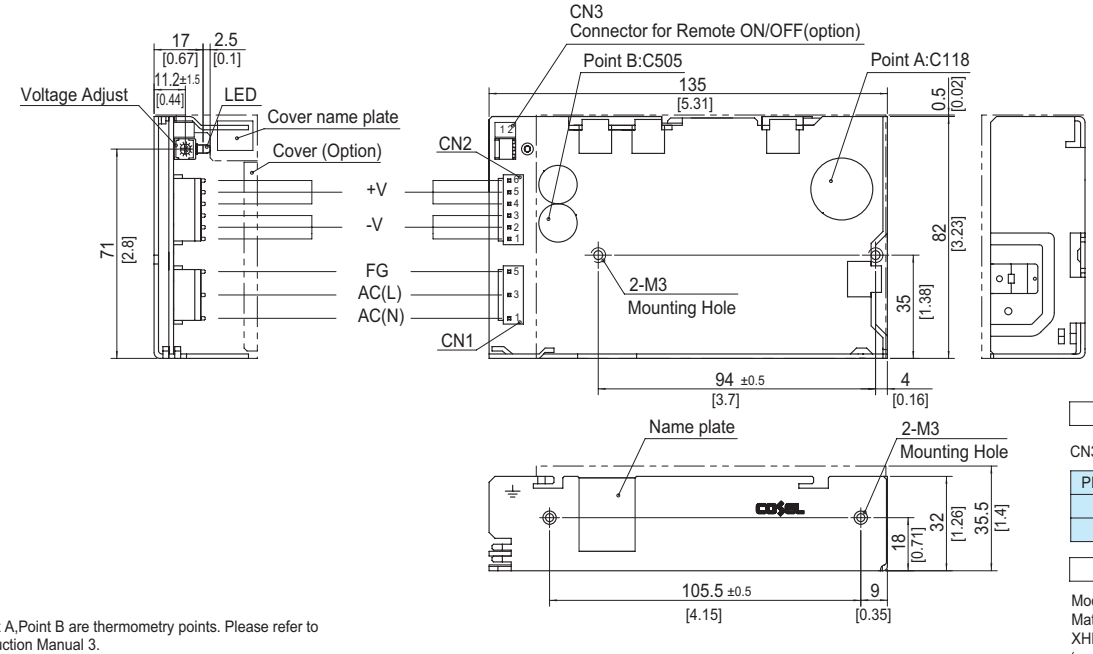
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN: RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Applicable when Remote ON/OFF (optional) is added. RC is insulated with input, output and FG.
＊4 Derating is required.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,T1,R and N is different from standard model and refer to 4 Option of instruction manual for detalis.



※ Point A,Point B are thermometry points. Please refer to Instruction Manual 3.

I/O Connector		Mating Connector	Terminal	
CN1	1-1123724-3	1-1123722-5	Chain	1123721-1
			Loose	1318912-1
CN2	1-1123723-6	1-1123722-6	Chain	1123721-1
			Loose	1318912-1

(Mfr : Tyco Electronics AMP)

※ I/O Connector is Mfr.Tyco Electronics AMP
※ Option : -J1 : (J.S.T) connector type
-T : Vertical terminal block type
-T1 : Horizontal terminal block type
Refer to Instruction Manual 4.

<PIN CONNECTION>

CN1

Pin No.	Input
1	AC(N)
2	
3	AC(L)
4	
5	FG

CN2

Pin No.	Output
1 - 3	-V
4 - 6	+V

Connector type

CN3 Option (Mfr:J.S.T)

PIN No.	Contents
1	RC(+)
2	RC(-)

Barrier strip type

Model B2B-XH-A
Mating Connector (Terminal)
XHP-2
(BXH-001T-P0.6
or SXH-001T-P0.6)

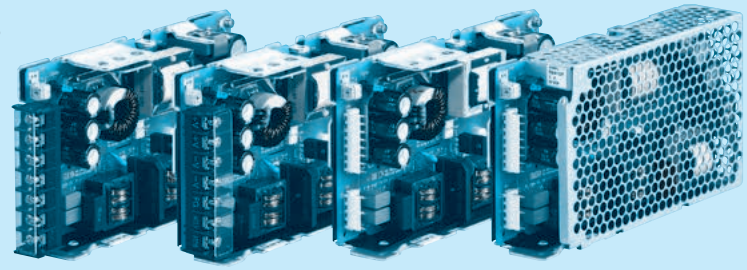
※ Tolerance : ±1 [±0.04]
※ Weight : 350g max (with cover : 395g max)
※ PCB Material/thickness : CEM-3 / 1.6mm [0.06inches]
※ Chassis material : Aluminum
※ Keep drawing current per pin bellow 5A of CN2.
※ Dimensions in mm, [ ]=inches
※ Mounting torque : 0.49N・m (5kgf・cm) max
※ Please connect safety ground to the unit in 2-M3 holes.

COSEL AC-DC Power Supplies Medical Type

PMA100F

Ordering information

PM	A	100	F	-□	-□
①	②	③	④	⑤	⑥



Horizontal terminal block (option : -T1) | Vertical terminal block (option : -T) | Standard type | with Cover (option : -N)

Example recommended EMI/EMC filter
NAM-06-000

Low leakage current type : NAM series

✻A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ✻5
T : Vertical terminal block
T1: Horizontal terminal block
N : with Cover
J1 : VH(J.S.T.)connector type
R : with Remote ON/OFF

Specification is changed at option, refer to Instruction Manual.

✻Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

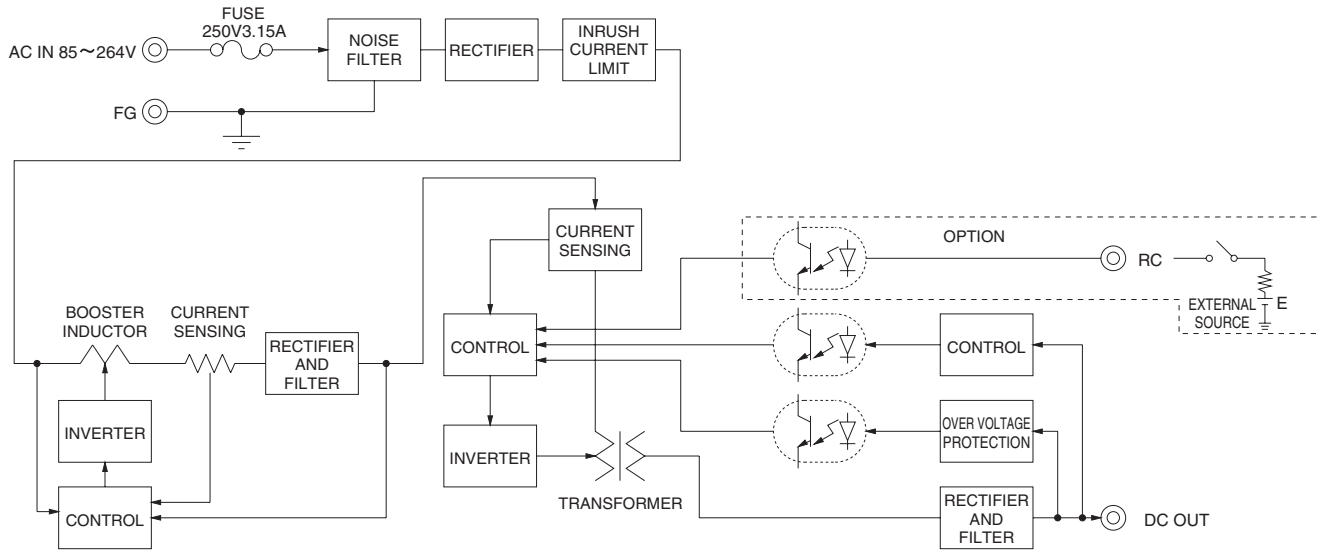
MODEL	PMA100F-3R3	PMA100F-5	PMA100F-12	PMA100F-24	PMA100F-48
MAX OUTPUT WATTAGE[W]	66	100	102	108	100.8
DC OUTPUT	3.3V 20A	5V 20A	12V 8.5A	24V 4.5A	48V 2.1A

SPECIFICATIONS

	MODEL		PMA100F-3R3	PMA100F-5	PMA100F-12	PMA100F-24	PMA100F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ (Refer to the Instruction Manual 1.1)				
	CURRENT[A]	ACIN 100V	0.9typ (Io=100%)	1.3typ (Io=100%)			
		ACIN 200V	0.5typ (Io=100%)	0.7typ (Io=100%)			
	FREQUENCY[Hz]		50 / 60 (47 - 63)				
	EFFICIENCY[%]	ACIN 100V	77typ	81typ	82typ	84typ	84typ
		ACIN 200V	78typ	83typ	83typ	86typ	86typ
	POWER FACTOR (Io=100%)	ACIN 100V	0.98typ				
		ACIN 200V	0.85typ	0.90typ			
	INRUSH CURRENT[A]	ACIN 100V	20typ (Io=100%) (At cold start)				
		ACIN 200V	40typ (Io=100%) (At cold start)				
	LEAKAGE CURRENT[mA]		0.09 / 0.18max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60601-1)				
OUTPUT	VOLTAGE[V]		3.3	5	12	24	48
	CURRENT[A]		20.0	20.0	8.5	4.5	2.1
	LINE REGULATION[mV]		20max	20max	48max	96max	192max
	LOAD REGULATION[mV]		40max	40max	100max	150max	240max
	RIPPLE[mVp-p] ✻1	0 to +50℃	80max	80max	120max	120max	150max
		-10 - 0℃	140max	140max	160max	160max	200max
	RIPPLE NOISE[mVp-p] ✻1	0 to +50℃	120max	120max	150max	150max	250max
		-10 - 0℃	160max	160max	180max	180max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	240max	480max
		-10 to +50℃	60max	60max	150max	290max	600max
	DRIFT[mV] ✻2		20max	20max	48max	96max	192max
	START-UP TIME[ms]		250typ (ACIN 100V, Io=100%)				
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)				
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.60	4.50 to 5.50	10.00 to 13.20	19.20 to 27.00	39.00 to 53.00
	OUTPUT VOLTAGE SETTING[V]		3.30 to 3.40	5.00 to 5.15	12.00 to 12.48	24.00 to 24.96	48.00 to 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]		4.00 to 5.25	5.75 to 7.00	15.00 to 18.00	30.00 to 37.00	58.00 to 65.00
	OPERATING INDICATION		LED (Green)				
	REMOTE ON/OFF		Optional (Required external power source)				
ISOLATION	INPUT-OUTPUT·RC ✻3		AC4,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	OUTPUT·RC-FG ✻3		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)				
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +70℃, 20 - 90%RH (Non condensing), 3,000m (10,000feet) max ✻4				
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max				
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis				
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis				
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60601-1, C-UL (CSA-C22.2 No.601.1), EN60601-1				
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR11-B, CISPR22-B, EN55011-B, EN55022-B				
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ✻6				
OTHERS	CASE SIZE/WEIGHT		34×93×168mm [1.34×3.66×6.61 inches] (W×H×D) / 560g max (with cover : 625g max)				
	COOLING METHOD		Convection				

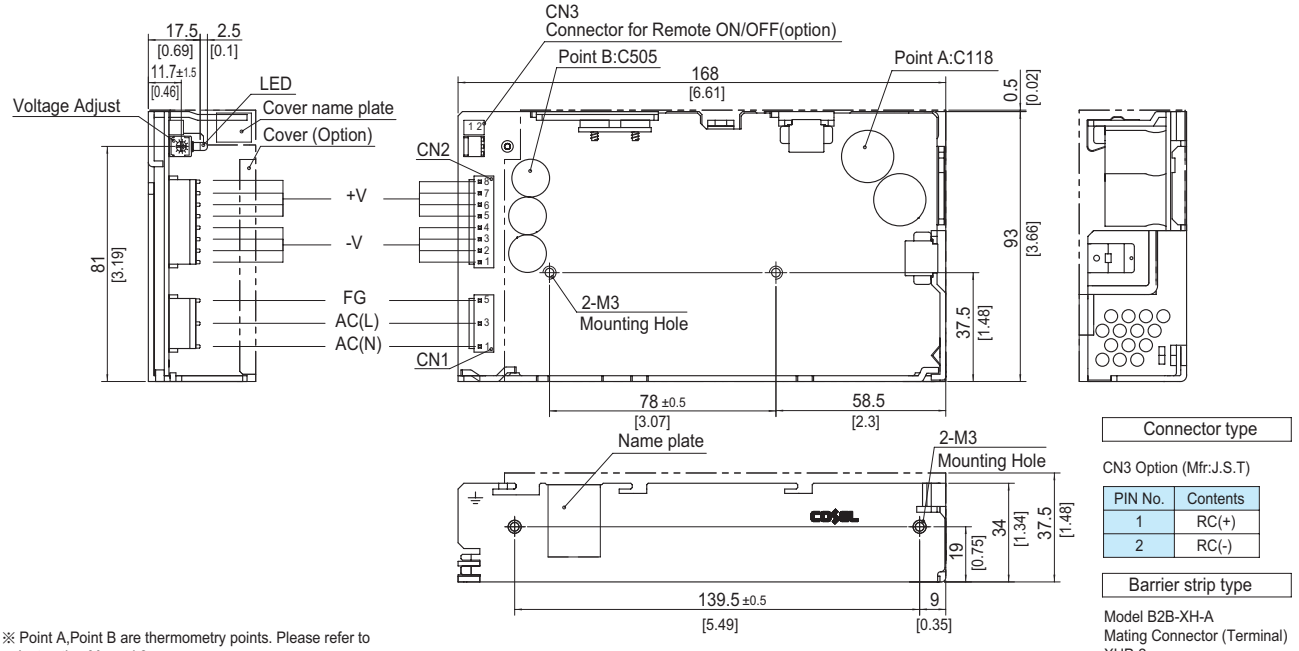
✻1 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN: RM101).
✻2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
✻3 Applicable when Remote ON/OFF (optional) is added. RC is insulated with input, output and FG.
✻4 Derating is required.
✻5 Please contact us about safety approvals for the model with option.
✻6 Please contact us about class C.
✻ Parallel operation with other model is not possible.
✻ Derating is required when operated with cover.
✻ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,T1,R and N is different from standard model and refer to 4 Option of instruction manual for detalis.



※ Point A,Point B are thermometry points. Please refer to Instruction Manual 3.

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			Loose	1318912-1
CN2	1-1123723-8	1-1123722-8	Chain	1123721-1
			Loose	1318912-1

(Mfr : Tyco Electronics AMP)

※ I/O Connector is Mfr.Tyco Electronics AMP
※ Option : -J1 : (J.S.T) connector type
-T : Vertical terminal block type
-T1 : Horizontal terminal block type
Refer to Instruction Manual 4.

<PIN CONNECTION>

CN1

Pin No.	Input
1	AC(N)
2	
3	AC(L)
4	
5	FG

CN2

Pin No.	Output
1 - 4	-V
5 - 8	+V

Connector type

CN3 Option (Mfr:J.S.T)

PIN No.	Contents
1	RC(+)
2	RC(-)

Barrier strip type

Model B2B-XH-A
Mating Connector (Terminal)
XHP-2
(BXH-001T-P0.6
or SXH-001T-P0.6)

※ Tolerance : ±1 [±0.04]
※ Weight : 560g max (with cover : 625g max)
※ PCB Material/thickness : CEM-3 / 1.6mm [0.06inches]
※ Chassis material : Aluminum
※ Keep drawing current per pin bellow 5A of CN2.
※ Dimensions in mm, [ ]=inches
※ Mounting torque : 0.49N・m (5kgf・cm) max
※ Please connect safety ground to the unit in 2-M3 holes.

Mouser Electronics

Authorized Distributor

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Cosel:

PMA100F-12 PMA100F-12-J1 PMA100F-12-J1N PMA100F-12-N PMA100F-12-R PMA100F-12-RN PMA100F-12-T PMA100F-12-T1 PMA100F-12-T1N PMA100F-12-TN PMA100F-24 PMA100F-24-J1 PMA100F-24-J1N PMA100F-24-N PMA100F-24-R PMA100F-24-RN PMA100F-24-T PMA100F-24-T1 PMA100F-24-T1N PMA100F-24-TN PMA100F-3R3 PMA100F-3R3-J1 PMA100F-3R3-J1N PMA100F-3R3-N PMA100F-3R3-R PMA100F-3R3-RN PMA100F-3R3-T PMA100F-3R3-T1 PMA100F-3R3-T1N PMA100F-3R3-TN PMA100F-48 PMA100F-48-J1 PMA100F-48-J1N PMA100F-48-N PMA100F-48-R PMA100F-48-RN PMA100F-48-T PMA100F-48-T1 PMA100F-48-T1N PMA100F-48-TN PMA100F-5 PMA100F-5-J1 PMA100F-5-J1N PMA100F-5-N PMA100F-5-R PMA100F-5-RN PMA100F-5-T PMA100F-5-T1 PMA100F-5-T1N PMA100F-5-TN PMA15F-12 PMA15F-12-J1 PMA15F-12-J1N PMA15F-12-N PMA60F-24-N PMA60F-24-R PMA60F-24-RN PMA60F-24-T PMA60F-24-T1 PMA60F-24-T1N PMA60F-24-TN PMA60F-3R3 PMA60F-3R3-J1 PMA60F-3R3-J1N PMA60F-3R3-N PMA60F-3R3-R PMA60F-3R3-RN PMA60F-3R3-T PMA60F-3R3-T1 PMA60F-3R3-T1N PMA60F-3R3-TN PMA60F-5 PMA60F-5-J1 PMA60F-5-J1N PMA60F-5-N PMA60F-5-R PMA60F-5-RN PMA60F-5-T PMA60F-5-T1 PMA60F-5-T1N PMA60F-5-TN PMA30F-3R3-T1N PMA30F-3R3-TN PMA30F-5 PMA30F-5-J1 PMA30F-5-J1N PMA30F-5-N PMA30F-5-T PMA30F-5-T1 PMA30F-5-T1N PMA30F-5-TN PMA60F-12 PMA60F-12-J1 PMA60F-12-J1N PMA60F-12-N PMA60F-12-R PMA60F-12-RN PMA60F-12-T PMA60F-12-T1 PMA60F-12-T1N